

## § 1210.20

necessary to ensure that lighters comply with this part 1210. Therefore, pursuant to section 17(g) of the CPSA, 15 U.S.C. 2066(g), the Commission may refuse to permit importation of any lighters with respect to which the manufacturer or importer has not complied with the recordkeeping and reporting requirements of this subpart. Since the records are required to demonstrate that production lighters comply with the specifications for the surrogate, the Commission may refuse importation of lighters if production lighters do not comply with the specifications required by this subpart or if any other recordkeeping or reporting requirement in this part is violated.

(b) *For noncompliance with this standard and for lack of a certification certificate.* As provided in section 17(a) of the CPSA, 15 U.S.C. 2066(a), products subject to this standard shall be refused admission into the customs territory of the United States if, among other reasons, the product fails to comply with this standard or is not accompanied by the certificate required by this standard.

### Subpart C—Stockpiling

AUTHORITY: 15 U.S.C. 2058(g)(2), 2079(d).

#### § 1210.20 Stockpiling.

(a) *Definition.* *Stockpiling* means to manufacture or import a product that is subject to a consumer product safety rule between the date of issuance of the rule and its effective date at a rate which is significantly greater than the rate at which such product was produced or imported during a base period.

(b) *Base Period.* For purposes of this rule, *base period* means, at the option of the manufacturer or importer, any 1-year period during the 5-year period prior to July 12, 1993.

(c) *Prohibited act.* Manufacturers and importers of disposable and novelty cigarette lighters shall not manufacture or import lighters that do not comply with the requirements of this part between July 12, 1993 and July 12, 1994, at a rate that is greater than the rate of production or importation during the base period plus 20 per cent of that rate.

## 16 CFR Ch. II (1–1–00 Edition)

### PART 1211—SAFETY STANDARD FOR AUTOMATIC RESIDENTIAL GARAGE DOOR OPERATORS

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AUTHORITY: 15 U.S.C. 2063 and 2065.

#### Subpart A—The Standard

SOURCE: 57 FR 60455, Dec. 21, 1992, unless otherwise noted.

##### § 1211.1 Effective date.

This standard applies to all residential garage door operators manufactured on or after January 1, 1993 for sale in the United States.

##### § 1211.2 Definition.

As used in this part 1211: *Residential garage door operator* means a vehicular door operator which:

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(a) Serves a residential building of one to four single family units;

(b) Is rated 600 volts or less; and

(c) Is intended to be employed in ordinary locations in accordance with the National Electrical Code, NFPA 70, 1993 edition. This incorporation by reference was approved by the Director of the Federal Register in accordance with U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, Mass. 02269-9101, tel. 1-800-344-3555. Copies may be inspected at the Consumer Product Safety Commission, Office of the Secretary, 4330 East West Highway, Bethesda, Maryland or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

[57 FR 60455, Dec. 21, 1992, as amended at 62 FR 46667, Sept. 4, 1997]

### § 1211.3 Units of measurement.

If a value for measurement as given in these requirements is followed by an equivalent value in other units, in parentheses, the second value may be only approximate. The first stated value is the requirement.

### § 1211.4 General requirements for protection against risk of injury.

(a) If an automatically reset protective device is employed, automatic restarting of a motor shall not result in a risk of injury to persons.

(b) A residential garage door operator is considered to comply with the requirement in paragraph (a) of this section if some means is provided to prevent the motor from restarting when the protector closes.

(c) An electronic or solid-state circuit that performs a back-up, limiting, or other function intended to reduce the risk of fire, electric shock, or injury to persons, including entrapment protection circuits, shall comply with the requirements in the Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991, 1st ed., dated July 19, 1991, including environmental and stress tests appropriate to the intended usage of the end-product. This incorporation by reference was approved by the Director of the Federal Register in accordance with U.S.C. 552(a) and 1 CFR part 51. Copies

may be obtained from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Ill. 60062-2096. Copies may be inspected at the Consumer Product Safety Commission, Office of the Secretary, 4330 East West Highway, Bethesda, Maryland or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

[57 FR 60455, Dec. 21, 1992, as amended at 62 FR 46667, Sept. 4, 1997]

### § 1211.5 General testing parameters.

(a) The following test parameters are to be used in the investigation of the circuit covered by § 1211.4(c) for compliance with the Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991, 1st ed., dated July 19, 1991, as incorporated by reference in paragraph (b)(3) of this section:

(1) Electrical supervision of critical components is acceptable if it results in an operator being inoperative with respect to downward movement of the door.

(2) A field strength of 3 volts per meter is to be used for the Radiated EMI Test.

(3) The Composite Operational and Cycling Test is to be used for 14 days at temperature extremes of minus 35 °Celsius (minus 31 °F) and 70 °C (158 °F).

(4) Exposure Class H5 is to be used for the Humidity Test.

(5) A vibration level of 5g is to be used for the Vibration Test.

(6) If a Computational Investigation is conducted,  $p$  shall not be greater than 6 failures/10<sup>6</sup> hours for the entire system. For external entrapment protection devices that are sold separately,  $p$  shall not be greater than 0 failures/10<sup>6</sup> hours. The Operational Test is to be conducted for 14 days.

(7) If the Demonstrated Method test is conducted, the multiplier is to be based on the continuous usage level, and a minimum of 24 units for a minimum of 24 hours per unit are to be tested.

(8) The Endurance test is to be conducted concurrently with the Operational test. The control shall perform its intended function while being conditioned for fourteen days in an ambient air temperature of 60 °C (140 °F), or 10 °C (18 °F) greater than the operating

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temperature of the control, whichever is higher. During the test, the control is to be operated in a manner representing the opening and closing of the door at a rate of one open-close operation per minute.

(b) In the evaluation of entrapment protection circuits used in residential garage door operators, the critical condition flow chart shown in figure 1 shall be used:

(1) To conduct a failure-mode and effect analysis (FMEA);

(2) In investigating the performance during the Environmental Stress Tests; and

(3) During the Power Cycling Tests in accordance with the Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991, 1st ed., dated July 19, 1991. This incorporation by reference was approved by the Di-

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rector of the Federal Register in accordance with U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062–2096. Copies may be inspected at the Consumer Product Safety Commission, Office of the Secretary, 4330 East West Highway, Bethesda, Maryland or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

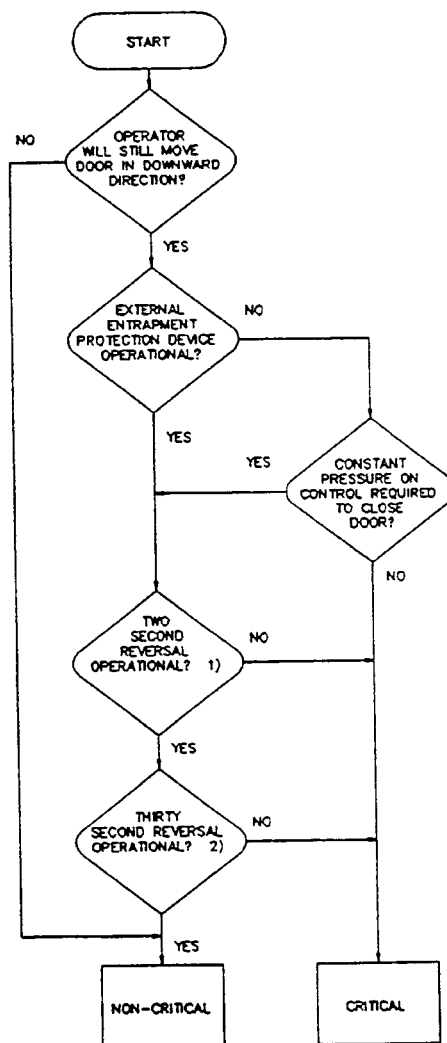
[57 FR 60455, Dec. 21, 1992, as amended at 62 FR 46667, Sept. 4, 1997]

### § 1211.6 General entrapment protection requirements.

(a) A residential garage door operator system shall be provided with inherent entrapment protection that complies with the requirements as specified in § 1211.7.

Figure 1

### CRITICAL CONDITION FLOW CHART ENTRAPMENT PROTECTION DEVICES AND FUNCTIONS



(b) In addition to the inherent entrapment protection as required by paragraph (a) of this section, a residen-

tial garage door operator shall comply with one of the following:

(1) Shall be constructed to:

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(i) Require constant pressure on a control to lower the door,

(ii) Reverse direction and open the door to the upmost position if constant pressure on a control is removed prior to operator reaching its lower limit, and

(iii) Permit a portable transmitter, if provided, to only function to cause the operator to open the door.

(2) Shall be provided with a means for connection of an external entrapment protection device as described in §§ 1211.8, 1211.10, 1211.11, and 1211.12.

(c) A mechanical switch or a relay used in an entrapment protection circuit shall withstand 100,000 cycles of operation controlling a load no less severe (voltage, current, power factor, inrush, and the like) than it controls in the operator, and shall function normally upon completion of the test.

(d) If failure of a switch or relay (open or short) described in paragraph (c) of this section results in loss of any entrapment protection required by § 1211.7(a), 1211.7(f), or 1211.8(a), the door operator shall result in one of the following conditions:

(1) The door operator becoming inoperative by the end of the open or close operation, or

(2) The door moving to and staying within 1 foot (305 mm) of the uppermost position.

(e) During the closing cycle, the system providing compliance with § 1211.7(a) and 1211.7(f) shall function regardless of a short or open anywhere in the low-voltage external wiring to the control, external entrapment devices, or any other external component.

### § 1211.7 Inherent entrapment protection requirements.

(a) Except for the first 1 foot (305 mm) of travel as measured over the path of the moving door operating member, both with and without any external entrapment protection device functional, a downward moving residential garage door operator shall initiate reversal of the door within 2 seconds of contact with the obstruction as specified in paragraph (b) of this section. After reversing the door, the door operator shall return the door to and stop at the full upmost position, unless a control is actuated or an inherent en-

trapment circuit senses an obstruction to stop the door during its upward travel. Compliance with this paragraph shall be tested in accordance with paragraphs (b) through (g) of this section.

(b) For the tests described in paragraph (a) of this section, a solid object is to be placed on the floor of the test installation and at various heights under the edge of the door and located in line with the driving point of the operator. When tested on the floor, the object shall be 1 inch (25.4 mm) high. In the test installation, the bottom edge of the door under the driving force of the operator is to be against the floor when the door is fully closed.

(c) An operator is to be tested for compliance with paragraph (a) of this section for 50 open-and-close cycles of operation while the operator is connected to the type of residential garage door with which it is intended to be used or with the doors specified in paragraph (e) of this section. The force adjustment on the operator is to be at the maximum setting or at the setting that represents the most severe operating condition. Any accessories that could have an effect on the intended operation of entrapment protection functions that are intended for use with the operator, are to be attached and the test is to be repeated for one additional cycle.

(d) The operator is to be adjusted (limit and force) according to instructions provided with the operator. The operator is to be tested for 10 additional obstruction cycles using the solid object described in paragraph (b) of this section at these settings.

(e) If an operator is intended to be used with more than one type of door, one sample of the operator is to be tested on a sectional door with a curved track and one sample is to be tested on a one-piece door with jamb hardware and no track. If the Operator is not intended for use on either or both of these types of doors, a one-piece door with track hardware or a one-piece door with pivot hardware, as appropriate, may be used for the tests. See the marking requirements at § 1211.15 of this subpart.

(f) An operator shall initiate reversal of the door and shall return the door to

and stop the door at the full upmost position, unless a control is actuated or an inherent entrapment protection circuit senses an obstruction to stop the door during its upward travel, if the lower limiting device is not actuated in 30 seconds or less following the initiation of the close cycle. If the door is stopped manually during its descent, the 30 seconds may be measured from the resumption of the close cycle.

(g) To determine whether an operator complies with the requirement in paragraph (f) of this section, an operator is to be subjected to 10 open-and-close cycles of operation while connected to the door or doors specified in paragraphs (c) and (e) of this section. The cycles of operation while connected to the door or doors need not be consecutive; that is, there may be any number of motor cooling-off periods during the test. The means provided to comply with the requirement in paragraph (a) of this section and §1211.8(a) are to be inoperative or defeated during the test. An obstructing object is to be provided so that the door cannot activate a lower limiting device.

**§1211.8 External entrapment protection requirements.**

(a) An external entrapment protection device provided with or as an accessory to an operator shall consist of either:

(1) A photoelectric sensor that when activated causes an operator closing a door to reverse direction of the door and prevents an operator from closing an open door,

(2) An edge sensor installed on the edge of the door that when activated causes an operator closing a door to reverse direction of the door and prevents an operator from closing an open door, or

(3) Any other device that provides entrapment protection equivalent to paragraphs (a) (1) or (2) of this section.

(b) With respect to the device mentioned in paragraph (a) of this section, a door operator shall monitor for the presence and correct operation of the device, including the wiring to it, at least once during each close cycle. Should the device not be present or a fault condition occur which precludes the sensing of an obstruction, includ-

ing an open or short circuit in the wiring that connects the external entrapment protection device to the operator and device's supply source, the operator shall function in one of the following conditions:

(1) A closing door shall open and an open door shall not close more than 1 foot (305 mm) below the upmost position, or

(2) The operator shall function as required by §1211.6(b)(1).

(c) An external entrapment protection device as mentioned in paragraph (a) of this section shall comply with the applicable requirements specified in §§1211.10, 1211.11, and 1211.12 of this subpart.

**§ 1211.9 Additional entrapment protection requirements.**

(a) A means to manually detach the door operator from the door shall be provided. The means shall be colored red and shall be easily distinguishable from the rest of the operator. It shall be capable of being adjusted to a height of 6 feet (1.8 m) above the garage floor when the operator is installed according to the instructions specified in §1211.13(a)(2) of this subpart. The means shall be constructed so that a hand can firmly grip it and detach the operator by applying a maximum of 50 pounds (223 N) of force to the means with the door obstructed in the down position. The obstructing object, as described in §1211.7(b), is to be located in several different positions. A marking with instructions for detaching the operator shall be provided as required by §1211.14(i).

(b) Actuation of a control that initiates movement of a door shall stop and may reverse the door on the down cycle. On the up cycle, actuation of a control shall stop the door but not reverse it.

(c) An operator shall be constructed so that adjustment of limit, force or other user controls and connection of external entrapment protection devices can be accomplished without exposing normally enclosed live parts or wiring.

**§ 1211.10 Requirements for all entrapment protection devices.**

(a) *General requirements.* (1) An external entrapment protection device shall

perform its intended function when tested in accordance with paragraphs (a) (2) through (4) of this section.

(2) The device is to be installed in the intended manner and its terminals connected to circuits of the door operator as indicated by the installation instructions.

(3) The device is to be installed and tested at minimum heights and widths representative of recommended ranges specified in the installation instructions. If not specified, devices are to be tested on a minimum 7 foot (2.1 m) wide door and maximum 20 foot (6.1 m) wide door.

(4) If powered by a separate source of power, the power-input supply terminals are to be connected to supply circuits of rated voltage and frequency.

(5) An external entrapment protection device requiring alignment, such as a photoelectric sensor, shall be provided with a means, such as a visual indicator, to show proper alignment and operation of the device.

(b) *Current protection test.* (1) There shall be no damage to the entrapment protection circuitry if low voltage field-wiring terminals or leads are shortened or miswired to adjacent terminals.

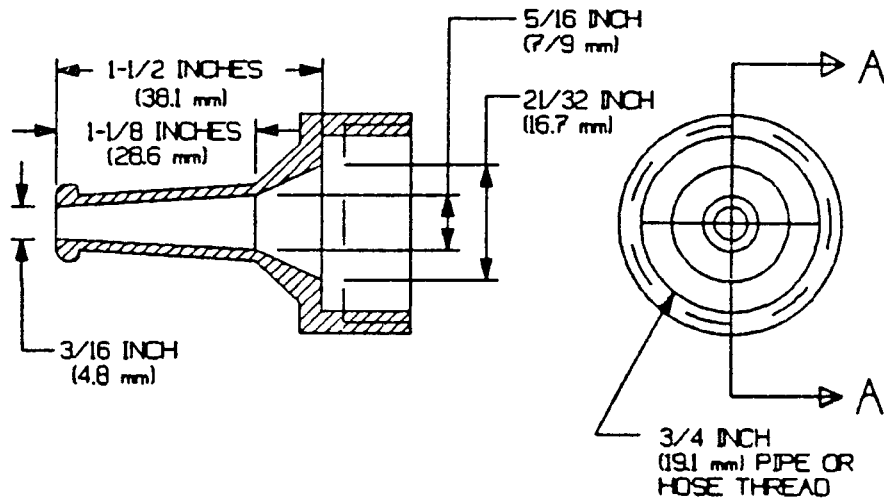
(2) To determine compliance with paragraph (b)(1) of this section, an external entrapment protection device is

to be connected to a door operator or other source of power in the intended manner, after which all connections to low voltage terminals or leads are to be reversed as pairs, reversed individually, or connected to any low voltage lead or adjacent terminal.

(c) *Splash test.* (1) An external entrapment protection device intended to be installed inside a garage 3 feet or less above the floor shall withstand a water exposure as described in paragraph (c)(2) of this section without resulting in a risk of electric shock and shall function as intended. After exposure, the external surface of the device may be dried before determining its functionality.

(2) An external entrapment protection device is to be indirectly sprayed using a hose having the free end fitted with a nozzle as illustrated in figure 2 and connected to a water supply capable of maintaining a flow rate of 5 gallons (19 liters) per minute as measured at the outlet orifice of the nozzle. The water from the hose is to be played, from all sides and at any angle against the floor under the device in such a manner most likely to cause water to splash the enclosure of electric components. However, the nozzle is not to be brought closer than 10 feet (3.05 m) horizontally to the device. The water is to be sprayed for 1 minute.

Figure 2

**NOZZLE****SECTION A-A**

(d) *Ultraviolet light exposure test.* A polymeric material used as a functional part of a device that is exposed to outdoor weather conditions shall comply with the Ultraviolet Light Exposure Test described in the Standard for Polymeric Materials—Use in Electrical Equipment Evaluations, UL 746C, 3rd ed., dated July 1, 1991. This incorporation by reference was approved by the Director of the Federal Register in accordance with U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Ill. 60062-2096. Copies may be inspected at the Consumer Product Safety Commission, Office of the Secretary, 4330 East West Highway, Bethesda, Maryland or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, D.C.

(e) *Resistance to impact test.* (1) An external entrapment protection device

employing a polymeric or elastomeric material as a functional part shall be subjected to the impact test specified in paragraph (e)(2) of this section. After being subjected to this test:

- (i) There shall be no cracking or breaking of the part, and
- (ii) The part shall operate as intended.

(2) Samples of the external entrapment protection device are to be subjected to the Impact Test described in the Standard for Polymeric Materials—Use in Electrical Equipment Evaluations, UL 746C, 3rd ed., dated July 1, 1991, as incorporated by reference in paragraph (d) of this section. The external entrapment protection device is to be subjected to 5 foot-pound (6.8 J) impacts. Three samples are to be tested, each sample being subjected to three impacts at different points.

(3) Each of three additional samples of a device exposed to outdoor weather



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when the door is the closed position are to be cooled to a temperature of minus  $31.0 \pm 3.6$  °F (minus  $35.0 \pm 2.0$  °C) and maintained at this temperature for 3 hours. Three samples of a device employed inside the garage are to be cooled to a temperature of  $32.0$  °F ( $0.0$  °C) and maintained at this temperature for 3 hours. While the sample is still cold, the samples are to be subjected to the impact test described in paragraph (e)(1) of this section.

[57 FR 60455, Dec. 21, 1992, as amended at 62 FR 46667, Sept. 4, 1997]

### **§ 1211.11 Requirements for photoelectric sensors.**

(a) *Normal operation test.* (1) When installed as described in § 1211.10(a) (1)–

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(4), a photoelectric sensor shall sense an obstruction as described in paragraph (a)(2) of this section that is to be placed on the floor at three points over the width of the door opening, at distances of 1 foot (305 mm) from each end and the midpoint.

(2) The obstruction noted in paragraph (a)(1) of this section shall consist of a white vertical surface 6 inches (152 mm) high by 12 inches (305 mm) long. The obstruction is to be centered under the door perpendicular to the plane of the door when in the closed position. See figure 3.

Figure 3

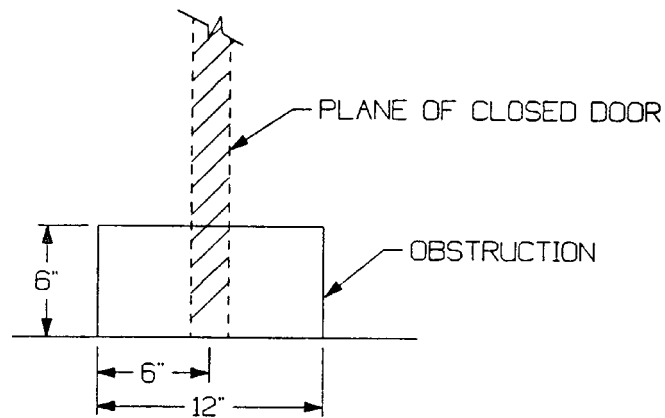
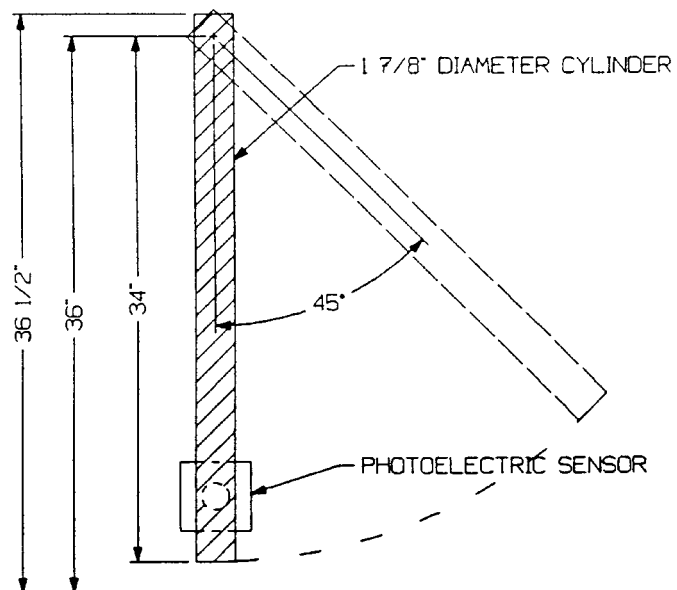
**STATIONARY OBSTRUCTION**

Figure 4

**MOVING OBSTRUCTION**

(b) *Sensitivity test.* (1) When installed as described in § 1211.10(a)(1)-(4), a photoelectric sensor shall sense the presence of a moving object when tested according to paragraph (b)(2) of this section.

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(2) The moving object is to consist of a  $1\frac{7}{8}$  inch (47.6 mm) diameter cylindrical rod,  $34\frac{1}{2}$  inches (876 mm) long, with the axis point being 34 inches (864 mm) from the end. The axis point is to be fixed at a point centered directly above the beam of the photoelectric sensor 36 inches (914 mm) above the floor. The photoelectric sensor is to be mounted at the highest position as recommended by the manufacturer. The rod is to be swung as a pendulum through the photoelectric sensor's beam from a position 45 degrees from the plane of the door when in the closed position. See figure 4.

(3) The test described in paragraph (b)(2) of this section is to be conducted

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at three points over the width of the door opening, at distances of 1 foot (305 mm) from each end and the midpoint.

(c) *Ambient light test.* (1) A photoelectric sensor shall operate as specified in §1211.8 (a) and (b) when subjected to ambient light impinging at an angle of 15 to 20 degrees from the axis of the beam when tested according to paragraph (c)(2) and, if appropriate, paragraph (c)(3) of this section.

(2) To determine compliance with paragraph (c)(1) of this section, a 500 watt, 3600K Photo Floodlamp, type DXC RFL-2, is to be energized from a 120-volt, 60-hertz source.

Figure 5

## AMBIENT LIGHT TEST

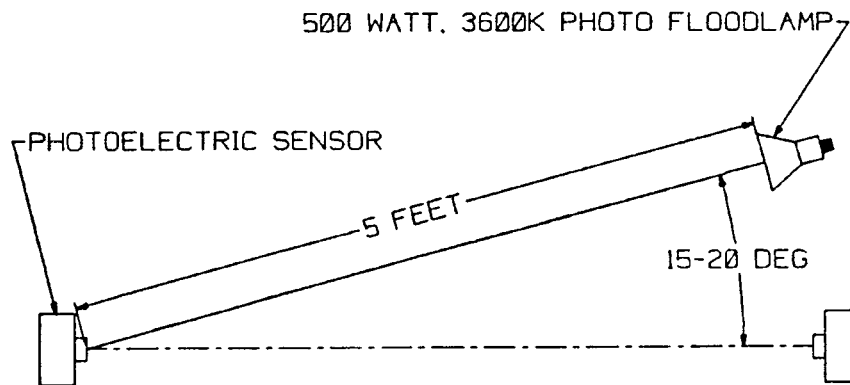
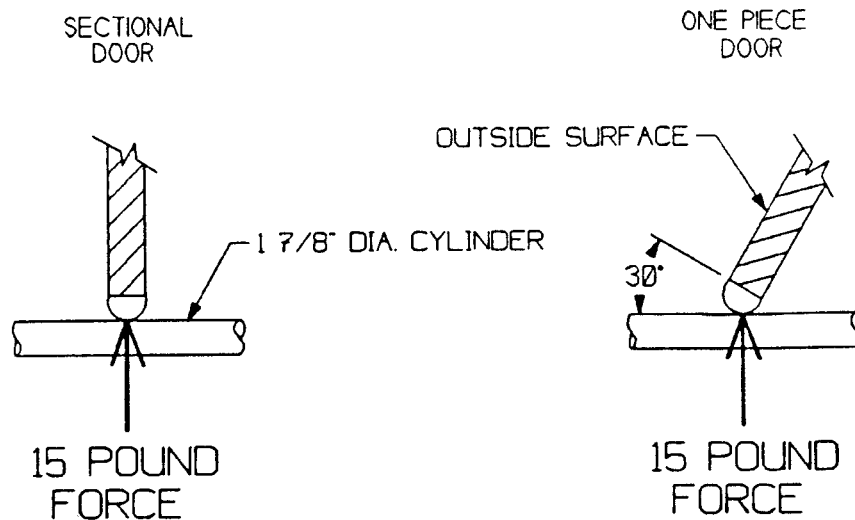


Figure 6

## EDGE SENSOR NORMAL OPERATION TEST



The lamp is to be positioned 5 feet from the front of the receiver and aimed directly at the sensor at an angle of 15 to 20 degrees from the axis of the beam. See figure 5.

## § 1211.12

(3) If the photoelectric sensor uses a reflector, this test is to be repeated with the lamp aimed at the reflector.

### § 1211.12 Requirements for edge sensors.

(a) *Normal operation test.* (1) When installed on a representative door edge, an edge sensor shall actuate upon the application of a 15 pounds (66.7 N) or less force in the direction of the application. For an edge sensor intended to be used on a sectional door, the force is to be applied by the longitudinal edge of a 1 $\frac{7}{8}$  inch (47.6 mm) diameter cylinder placed across the switch so that the axis is perpendicular to the plane of the door. For an edge sensor intended to be used on a one piece door, the force is to be applied so that the axis is at an angle 30 degrees from the direction perpendicular to the plane of the door. See figure 6.

(2) With respect to the test of paragraph (a)(1) of this section, the test is to be repeated at various representative points of the edge sensor across the width of the door.

(3) Exception: The edge sensor need not be sensitive to actuation two inches (50.4 mm) or less from each end of the intended width of the door opening.

(b) *Endurance test.* An edge sensor system and associated components shall withstand 30,000 cycles of mechanical operation without failure. For this test, the edge sensor is to be cycled by the repetitive application of

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the force as described in paragraph (a)(1) of this section. The force is to be applied to the same location for the entire test. For an edge sensor system employing integral electric contact strips, this test shall be conducted with the contacts connected to a load no less severe than it controls in the operator. For the last 50 cycles of operation, the sensor shall function as intended when connected to an operator.

(c) *Elastomeric material conditioning test.* (1) An elastomeric material used as a functional part of an edge sensor shall function as intended when subjected to:

(i) Accelerated Aging Test of Gaskets, stated in paragraph (c)(3) of this section, and

(ii) Puncture Resistance Test, stated in paragraph (d) of this section.

(2) An elastomeric material used for a functional part that is exposed to outdoor weather conditions when the door is in the closed position shall have physical properties as specified in table 1 after being conditioned in accordance with the Ultraviolet Light Exposure Test described in the Standard for Polymeric Materials—Use in Electrical Equipment Evaluations, UL 746C, 3rd ed., dated July 1, 1991. This incorporation by reference was approved by the Director of the Federal Register in accordance with U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

Table 1

**PHYSICAL PROPERTIES OF GASKET-ACCELERATED  
AGING TEST**

	<b>Before Accelerated Aging</b>	<b>After Accelerated Aging</b>
<b>Recovery -- Maximum set when 2-inch (50.8-mm) gauge marks are stretched to 5 inches (127 mm), held for 2 minutes, and measured 2 minutes after release</b>	<b>1/2 inch (12.7 mm)</b>	<b>--</b>
<b>Elongation -- Minimum increase in distance between 2- inch gauge marks at break</b>	<b>250 percent [2 to 7 inches (50.8—178.8 mm)]</b>	<b>65 percent of original</b>
<b>Tensile Strength -- Minimum force at breaking point</b>	<b>850 pounds per square inch (59 mPa)</b>	<b>75 percent of original</b>

Copies may be inspected at the Consumer Product Safety Commission, Office of the Secretary, 4330 East West Highway, Bethesda, Maryland or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(3) Rubber compounds forming gaskets that are depended upon for protec-

tion from rain shall have physical properties as specified in table 1, before and after conditioning for 168 hours in an air-circulating oven at 70 °C (158 °F).

(d) *Puncture resistance test.* (1) After being subjected to the test described in paragraph (d)(2) of this section, an elastomeric material that is a functional part of an edge sensor shall:

(i) Not be damaged in a manner that would adversely affect the intended operation of the edge sensor, and

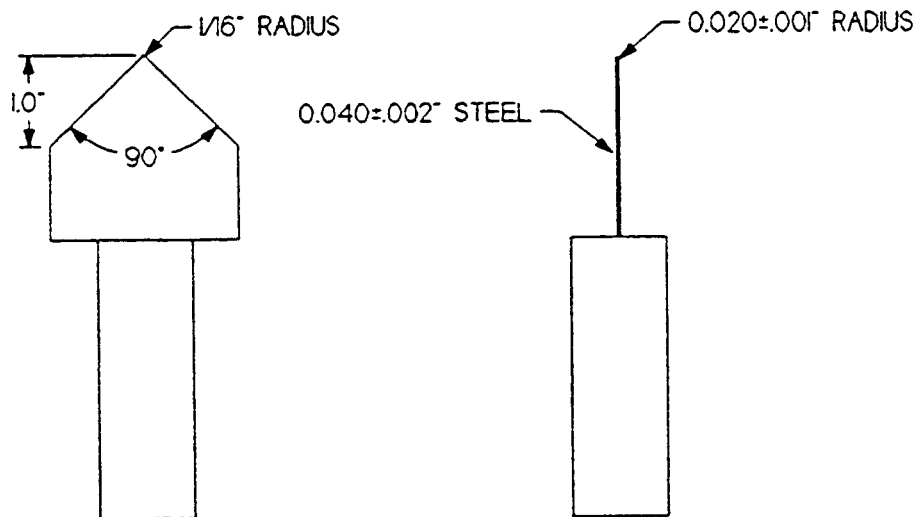
(ii) Maintain enclosure integrity if it serves to reduce the likelihood of contamination of electrical contacts.

(2) A sample of the edge sensor is to be installed in the intended manner on a representative door edge. The probe

described in figure 7 is to be applied with a 20 pound-force (89N) to any point on the sensor that is 3 inches or less above the floor is to be applied in the direction specified in the Edge Sensor Normal Operation Test, figure 6. The test is to be repeated on three locations on each surface of the sensor being tested.

Figure 7

## PUNCTURE PROBE



[57 FR 60455, Dec. 21, 1992, as amended at 62 FR 46667, Sept. 4, 1997]

### § 1211.13 Instruction manual.

(a) *General.* (1) A residential garage door operator shall be provided with an instruction manual. The instruction manual shall give complete instructions for the installation, operation, and user maintenance of the operator.

(2) Instructions that clearly detail installation and adjustment procedures required to effect proper operation of the safety means provided shall be provided with each door operator.

(3) A residential garage door or door operator shall be provided with complete and specific instructions for the correct adjustment of the control mechanism and the need for periodic checking and, if needed, adjustment of the control mechanism so as to maintain satisfactory operation of the door.

(4) The instruction manual shall include the important instructions specified in paragraphs (b)(1) and (2) of this section. All required text shall be legible and contrast with the background. Upper case letters of required text

shall be no less than  $\frac{5}{64}$  inch (2.0 mm) high and lower case letters shall be no less than  $\frac{1}{16}$  inch (1.6 mm) high. Heading such as "Important Installation Instructions," "Important Safety Instructions," "Save These Instructions," and the words "Warning—To reduce the risk of severe injury or death to persons:" shall be in letters no less than  $\frac{3}{16}$  inch (4.8 mm) high.

(5) The instructions listed in paragraphs 1211.13(b)(1) and (2) shall be in the exact words specified or shall be in equally definitive terminology to those specified. No substitutes shall be used for the word "Warning." The items may be numbered. The first and last items specified in paragraph (b)(2) of this section shall be first and last respectively. Other important and precautionary items considered appropriate by the manufacturer may be inserted.

(6) The instructions listed in paragraph (b)(1) of this section shall be located immediately prior to the installation instructions. The instructions listed in paragraph (b)(2) of this section shall be located immediately prior to user operation and maintenance instructions. In each case, the instructions shall be separate in format from other detailed instructions related to installation, operation and maintenance of the operator. All instructions, except installation instructions, shall be a permanent part of the manual(s).

(b) *Specific required instructions.* (1) The Installation Instructions shall include the following instructions:

#### Important Installation Instructions

Warning—To reduce the risk of severe injury or death:

1. Read and follow all Installation Instructions.
2. Install only a properly balanced garage door. An improperly balanced door could cause severe injury. Have a qualified service person make repairs to cables, spring assemblies and other hardware before installing opener.
3. Remove all ropes and remove or make inoperative all locks connected to the garage door before installing opener.
4. If possible, install door opener 7 feet or more above the floor. Mount the emergency release 6 feet above the floor.
5. Do not connect opener to source of power until instructed to do so.
6. Locate control button: (a) within sight of door, (b) at a minimum height of 5 feet so

small children cannot reach it, and (c) away from all moving parts of the door.

7. Install Entrapment Warning Label next to the control button in a prominent location. Install the Emergency Release Marking. Attach the marking on or next to the emergency release.

8. After installing opener, the door must reverse when it contacts a  $1\frac{1}{2}$  inch high object (or a 2 by 4 board laid flat) on the floor.

(2) The User Instructions shall include the following instructions:

#### Important Safety Instructions

Warning—To reduce the risk of severe injury or death:

1. Read and Follow all Instructions.
2. Never let children operate, or play with door controls. Keep the remote control away from children.
3. Always keep the moving door in sight and away from people and objects until it is completely closed. No One Should Cross the Path of the Moving Door.
4. Test door opener monthly. The garage door MUST reverse on contact with a 1 inch object (or a 2 by 4 board laid flat) on the floor. After adjusting either the force or the limit of travel, retest the door opener. Failure to adjust the opener properly may cause severe injury or death.
5. If possible, use the emergency release only when the door is closed. Use caution when using this release with the door open. Weak or broken springs may allow the door to fall rapidly, causing injury or death.
6. Keep Garage Doors Properly Balanced. See owner's manual. An improperly balanced door could cause severe injury or death. Have a qualified service person make repairs to cables, spring assemblies and other hardware.
7. Save These Instructions.

#### § 1211.14 Field-installed labels.

(a) A residential garage door operator shall be provided with labels for field installation and constructed as specified in paragraphs (c) through (i) of this section. The labels shall be acceptable for permanent installation. The instruction manual shall specify where the labels are to be located.

(b) If labels secured by adhesive are used, the instruction shall specify that an additional mechanical means shall be used to secure the labels to surfaces to which the adhesive will not adhere.

(c) A residential garage door operator shall be provided with a cautionary label intended for permanent installation to identify the possible risk of entrapment. The instruction manual



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shall direct that the label be affixed near the wall-mounted control button.

(d) The label required in accordance with paragraph (c) of this section shall be in a vertical layout with three panels:

- (1) A signal word panel,
- (2) A pictorial panel, and
- (3) A message panel, with adjacent panels delineated from each other by a horizontal black line. The entire label shall be surrounded by a black border and shall measure at least 5 inches (127 mm) wide by 6¼ inches (159 mm) long overall.

(e) The signal word panel as specified in paragraph (d) of this section shall contain the word “WARNING,” in uppercase letters, preceded by a safety alert symbol consisting of an orange exclamation mark on a black solid equilateral triangle background with the point of the triangle oriented upward. The word “WARNING” and the safety alert symbol shall be centered on one line and shall be in black letters at least ⅞ inch (11.1 mm) high on an orange background.

(f) The pictorial panel as specified in paragraph (d) of this section shall be positioned between the signal word panel and the message panel. The pictorial shall be black on a white background and shall clearly depict a child running toward or under a garage door. A red prohibition symbol (slash, oriented from the upper left to the lower right, through a circle) shall be superimposed over, and totally surround, the pictorial. The pictorial shall have an overall diameter of 1-7½ inch (47.6 mm) minimum.

(g) The message panel as specified in paragraph (d) of this section shall include the following text or an equivalent wording:

- (1) Possible Risk and Consequence Statement—“A child may become trapped under an automatic garage door resulting in severe injury or death.”
- (2) Avoidance Statements—
  - (i) “Do not allow children to walk or run under a closing door.”
  - (ii) “Do not allow children to operate door operator controls.”
  - (iii) “Always keep a closing door within sight.”

(iv) “If a person is trapped under the door, push the control button or use the emergency release.”

(3) Instructions—

(i) “Test Door Operator Monthly: Use a 1½ inch thick object placed on the floor under the closing door. If the door does not reverse upon contact, adjust, repair, or replace the operator.”

(ii) Additional instructions on not removing or painting over the label, mounting the label adjacent to the wall control, and mounting the wall control out of children’s reach shall be provided. These additional instruction shall be in less prominent lettering than those in paragraph (g)(3)(i) of this section.

(h) The lettering of the message panel described in paragraph (g) of this section shall be black on a white background and shall be sans serif letters in combinations of upper case and lower case letters. The upper case letters of the Possible Risk and Consequence Statements and Avoidance Statements shall be ⅛ inch (3.18 mm) high minimum. The lettering of the Possible Risk and Consequence Statement shall be in italics, underlined, bold, or the like, and shall be double spaced from the Avoidance Statements. All other instructions shall be in letters less prominent than the Possible Risk and Consequence Statements and shall be separated with at least a single space between individual instructions.

(i) A residential garage door operator shall be provided with a cautionary marking attached to or adjacent at all times to the means provided to detach the operator from the garage door. The marking shall include the following statement or the equivalent: “If the door becomes obstructed, detach door from operator as follows: (The method to detach the operator shall be shown on the marking.)”

### § 1211.15 UL marking requirements.

(a) Unless specifically excepted, marking required in this standard shall be permanent. Ink-printed and stenciled markings, decalcomania labels, and pressure sensitive labels are among the types of marking that are considered acceptable if they are acceptably applied and are of good quality.

(b) Except as provided below, a garage door operator shall be plainly marked, at a location where the marking will be readily visible—after installation, in the case of a permanently connected appliance—with:

(1) The manufacturer's name, trademark, or other descriptive marking by which the organization responsible for the product may be identified—hereinafter referred to as the manufacturer's name;

(2) The catalog number or the equivalent;

(3) The voltage, frequency, and input in amperes or watts; and

(4) The date or other dating period of manufacture not exceeding any three consecutive months.

(c) The ampere rating shall be included unless the full-load power factor is 80 percent or more, or, for a cord-connected operator, unless the rating is 50 watts or less. The number of phases shall be indicated if an operator is for use on a polyphase circuit. The date code repetition cycle shall not be less than 20 years.

(d) Exception No. 1: The manufacturer's identification may be in a traceable code if the operator is identified by the brand or trademark owned by a private labeler.

(e) Exception No. 2: The date of manufacture may be abbreviated or in an established or otherwise accepted code.

(f) If a manufacturer produces or assembles operators at more than one factory, each finished operator shall have a distinctive marking, which may be in code, to identify it as the product of a particular factory.

(g) The carton and the instruction manual for an operator shall be marked with the word "WARNING" and the following or the equivalent: "To reduce the risk of injury to persons—Use this operator only with (a) door(s)."

(h) A residential garage door operator shall be marked with the word "WARNING" and the following or equivalent, "Risk of entrapment. After adjusting either the force or limits of travel adjustments, insure that the door reverses on a 1½ inch (or a 2 by 4 board laid flat) high obstruction on the floor."

(i) A separately supplied accessory, including external entrapment protection device, intended for installation with an appliance or appliances shall be marked with the manufacturer's name and catalog or model number and the type of appliance or appliances with which it is intended to be used—such as a residential garage door operator. Additionally, installation instructions, accompanying specifications sheet, or packaging of the accessory shall identify the appliance or appliances with which it is intended to be used by specifying the manufacturer's name and catalog or model number or by any other positive means to serve the identification purpose.

(j) An appliance provided with terminals or connectors for connection of a separately supplied accessory, such as an external entrapment protection device, shall be marked to identify the accessory intended to be connected to the terminals or connectors. The accessory identification shall be by manufacturer's name and catalog or model number or other means to allow for the identification of accessories intended for use with the appliance.

(k) With reference to paragraph (k) of this section, instructions for installing a separately supplied accessory shall be provided. A statement shall be included in the instructions warning the user that the appliance must be disconnected from the source of supply before attempting the installation of the accessory.

#### § 1211.16 Statutory labeling requirement.

(a) A manufacturer selling or offering for sale in the United States an automatic residential garage door operator manufactured on or after January 1, 1991, shall clearly identify on any container of the system and on the system the month or week and year the system was manufactured and its conformance with the requirements of this part.

(b) The display of the UL logo or listing mark, and compliance with the date marking requirements of UL-325 now stated in § 1211.5 of this subpart, on both the container and the system, shall satisfy the requirements of this subpart.

### Subpart B—Certification

SOURCE: 57 FR 60468, Dec. 21, 1992, unless otherwise noted.

#### § 1211.20 Purpose, scope, and application.

(a) *Purpose.* Section 14(a) of the Consumer Product Safety Act, 15 U.S.C. 2063(a), requires every manufacturer (including importers) and private labeler of a product which is subject to a consumer product safety standard to issue a certificate that the product conforms to the applicable standard, and to base that certificate either on a test of each product or on a “reasonable testing program.” The purpose of this subpart is to establish requirements that manufacturers and importers of automatic residential garage door operators subject to the Safety Standard for Automatic Residential Garage Door Operators (16 CFR part 1211, subpart A), shall issue certificates of compliance in the form specified.

(b) *Scope and application.* The provisions of this subpart apply to all residential garage door operators which are subject to the requirements of the Safety Standard for Automatic Residential Garage Door Operators that take effect on January 1, 1993 or later.

#### § 1211.21 Effective date.

Under the Consumer Product Safety Act, automatic residential garage door operators must certify that they comply with requirements of subpart A of this part. This certification requirement is currently in effect. The specific labeling requirement of the certification rule in this subpart will become effective for any automatic residential garage door operator manufactured on or after January 21, 1993.

#### § 1211.22 Definitions.

The following definitions shall apply to this subpart:

(a) *Private labeler* means an owner of a brand or trademark which is used on an operator subject to the standard and which is not the brand or trademark of the manufacturer of the operator, provided the owner of the brand or trademark caused or authorized the operator to be so labeled and the brand or

trademark of the manufacturer of such operator does not appear on the label.

(b) *Production lot* means a quantity of garage door operators from which certain operators are selected for testing prior to certifying the lot. All garage door operators in a lot must be essentially identical in those design, construction, and material features which relate to the ability of an operator to comply with the standard.

(c) *Reasonable testing program* means any test or series of tests which are identical or equivalent to, or more stringent than, the tests defined in the standard and which are performed on one or more garage door operators of the production lot for the purpose of determining whether there is reasonable assurance that the operators in that lot comply with the requirements of the standard.

#### § 1211.23 Certification testing.

(a) *General.* Manufacturers and importers shall either test each individual garage door operator (or have it tested) or shall rely upon a reasonable testing program to demonstrate compliance with the requirements of the standard.

(b) *Reasonable testing program.* This paragraph provides guidance for establishing a reasonable testing program.

(1) A reasonable testing program for automatic residential garage door operators is one that provides reasonable assurance that the operators comply with the standard. Manufacturers and importers may define their own testing programs. Such reasonable testing programs may, at the option of manufacturers and importers, be conducted by an independent third party qualified to perform such testing programs.

(2) To conduct a reasonable testing program, the garage door operators should be divided into production lots. Sample operators from each production lot should be tested in accordance with the reasonable testing program so that there is a reasonable assurance that if the operators selected for testing meet the standard, all operators in the lot will meet the standard. Where there is a change in parts, suppliers of parts, or production methods that could affect the ability of the operator to comply with the requirements of the standard,

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the manufacturer should establish a new production lot for testing.

(3) The Commission will test for compliance with the standard by using the test procedures contained in the standard. However, a manufacturer's reasonable testing program may include either tests prescribed in the standard or any other reasonable test procedures.

(4) If the reasonable testing program shows that an operator does not comply with one or more requirements of the standard, no operator in the production lot can be certified as complying until all non-complying operators in the lot have been identified and destroyed or altered by repair, redesign, or use of a different material or components to the extent necessary to make them conform to the standard. The sale or offering for sale of garage door operators that do not comply with the standard is a prohibited act and a violation of section 19(a) of the CPSA (15 U.S.C. 2068(a)), regardless of whether the operator has been validly certified.

### § 1211.24 Product certification and labeling by manufacturers.

(a) *Form of permanent label of certification.* Manufacturers (including importers) shall issue certificates of compliance for automatic residential garage door operators manufactured after the effective date of the standard in the form of a permanent label which can reasonably be expected to remain on the operator during the entire period the operator is capable of being used. Such labeling shall be deemed to be a "certificate" of compliance as that term is used in section 14 of the CPSA, 15 U.S.C. 2063.

(b) *Exception for UL listed operators.* The certification labeling requirement of paragraph (a) of this section shall be satisfied by display of the Underwriters Laboratories, Inc. (UL) logo or listing mark, and compliance with the date marking requirements of UL Standard for Safety 325, on both the operator system and its container. Operators displaying the UL logo or listing mark and complying with the UL standard are exempt from the requirements of paragraphs (c) and (d) of this section.

(c) *Contents of certification label.* The certification labels required by this

section shall clearly and legibly contain the following information:

(1) The statement "Meets CPSC (insert 1993 or later date of applicable standard) garage door operator entrapment protection requirements."

(2) An identification of the production lot.

(d) *Placement of the label.* The label required by this section must be affixed to the operator. If the label is not immediately visible to the ultimate purchaser of the garage door operator prior to purchase because of packaging or other marketing practices, a second label that states: "Meets CPSC

(insert 1993 or later date of applicable standard) garage door operator entrapment protection requirements," along with the month or week and year of manufacture must appear on the container or, if the container is not visible, on the promotional material used with the sale of the operator.

### § 1211.25 Product certification and labeling by importers.

(a) *General.* The importer of any automatic residential garage door operator subject to the standard in subpart A of this part must issue the certificate of compliance required by section 14(a) of the CPSA and § 1211.24 of this subpart. If testing of each operator, or a reasonable testing program, meeting the requirements of this subpart has been performed by or for the foreign manufacturer of the product, the importer may rely in good faith on such tests to support the certificate of compliance provided the importer is a resident of the United States or has a resident agent in the United States and the records of such tests required by § 1211.31 of subpart C of this part are maintained in the United States.

(b) *Responsibility of importer.* If the importer relies on tests by the foreign manufacturer to support the certificate of compliance, the importer bears the responsibility for examining the records supplied by the manufacturer to determine that the records of such tests appear to comply with § 1211.31 of subpart C of this part.

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### Subpart C—Recordkeeping

SOURCE: 57 FR 60468, Dec. 21, 1992, unless otherwise noted.

#### § 1211.30 Effective date.

The recordkeeping requirements in this subpart shall become effective on January 21, 1993, and shall apply to automatic residential garage door operators manufactured on or after that date.

#### § 1211.31 Recordkeeping requirements.

(a) *General.* Every person issuing certificates of compliance for automatic residential garage door operators subject to the standard set forth in subpart A of this part shall maintain written records which show that the certificates are based on a test of each operator or on a reasonable testing program. The records shall be maintained for a period of at least three years from the date of certification of each operator or the last operator in each production lot. These records shall be available to any designated officer or employee of the Commission upon request in accordance with section 16(b) of the CPSA, 15 U.S.C. 2065(b).

(b) *Content of records.* Records shall identify the operators tested and the production lot and describe the tests the operators were subjected to in sufficient detail so the tests may be replicated. Records shall also provide the results of the tests including the precise nature of any failures, and specific actions taken to address any failures.

(c) *Format for records.* The records required to be maintained by this section may be in any appropriate form or format that clearly provides the required information.

## PART 1212—Safety Standard for Multi-Purpose Lighters

### Subpart A—Requirements for Child-Resistance

Sec.

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- 1212.20 Stockpiling.

### APPENDIX A TO PART 1212—FINDINGS UNDER THE CONSUMER PRODUCT SAFETY ACT

SOURCE: 64 FR 71872, Dec. 22, 1999, unless otherwise noted.

EFFECTIVE DATE NOTE: At 64 FR 71872, Dec. 22, 1999, part 1212 was added, effective Dec. 22, 2000.

### Subpart A—Requirements for Child-Resistance

AUTHORITY: 15 U.S.C. 2056, 2058, 2079(d).

#### § 1212.1 Scope, application, and effective date.

This part 1212, a consumer product safety standard, prescribes requirements for multi-purpose lighters. These requirements are intended to make the multi-purpose lighters subject to the standard's provisions resistant to successful operation by children younger than 5 years of age. This standard applies to all multi-purpose lighters, as defined in § 1212.2, that are manufactured in the United States, or imported, on or after December 22, 2000.

#### § 1212.2 Definitions.

As used in this part 1212:

(a)(1) Multi-purpose lighter, (also known as grill lighter, fireplace lighter, utility lighter, micro-torch, or gas match, etc.) means: A hand-held, flame-producing product that operates on fuel, incorporates an ignition mechanism, and is used by consumers to ignite items such as candles, fuel for fireplaces, charcoal or gas-fired grills, camp fires, camp stoves, lanterns, fuel-fired appliances or devices, or pilot lights, or for uses such as soldering or brazing. Some multi-purpose lighters